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Notice of Allowability

Application No.

10/606,402

Examiner

Michael W. Talbot

Applicant(s)

BUTTRICK, JAMES N.

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 06 February 2007.
2. ☒ The allowed claim(s) is/are 1-26 and 28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Monica S. Carter
MONICA CARTER
SUPERVISORY PATENT EXAMINER

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 9/19/05,11/21/05,2/6/07.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Dale C. Barr on Wednesday, 11 April 2007.

The application has been amended as follows:

Claims:

(a) Add the claim limitations of "new" claim 27 into existing "previously presented" claim 23 so as to read:

A method of performing a manufacturing operation on a workpiece, the method comprising:

providing a tool feed unit having a base member moveably coupled to a drive platform by a plurality of guide members, the base member defining a first aperture and the drive platform defining a second aperture approximately aligned with the first aperture along an axis, at least one of the drive platform and the base member being moveable along the guide members to increase or decrease a separation distance therebetween, the tool feed unit including at least one drive member operatively coupled between the drive platform and the base member, and a servo motor operatively coupled to the at least one drive member, wherein the plurality of guide members and the at least one drive member are distributed around a perimeter of the first and second apertures;

operatively coupling a manufacturing tool to the tool feed unit; and

controllably rotating the at least one drive member using the servo motor to vary separation distance between the drive platform and the base member and to engage the manufacturing tool with the workpiece, wherein controllably rotating the at least one drive member includes controllably rotating the at least one drive member using a drive belt operatively coupled between an output shaft of the servo motor and the at least one drive member.

(b) Delete claim 27 in its entirety.

2. The following is an examiner's statement of reasons for allowance:

Claims 1-26 and 28 are allowed.

Claims 1,13 and 23 are the independent claims.

3. Regarding claims 1 and 23, the prior art of record fails to anticipate or make obvious an apparatus having (1) "a servo motor operatively coupled to the at least one drive member by a feed unit that includes at least one drive belt operatively coupled between an output shaft of the servo motor and the at least one drive member", solely or in combination, with an apparatus having a base member with a first aperture disposed therethrough, a drive platform spaced from the base member and having a second aperture disposed therethrough and in approximate alignment with the first aperture, a plurality of guide members extending between the base and the drive platform, and at least one drive member operatively coupled between the drive platform and the base member wherein the plurality of guide members and the at least one drive member are distributed around a perimeter of the first and second apertures.

York '814 is the closest art of record.

York '814 shows in Figure 1 an apparatus (10) comprising a base member (22) having a first aperture/annular portion (at base of 32) disposed there through, a drive platform (24) being spaced apart from the base member by a separation distance and having a second

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aperture/annular portion (at 32) disposed there through and approximately aligned with the first aperture along an axis, a plurality of guide members (18,20) extending between the drive platform and base member wherein at least one of the drive platform and the base member is moveable along guide members to changed the separation distance (col. 2, lines 26-31), at least one drive member (32) coupled between the drive platform and the base member, and a servo motor (36 and col. 2, lines 43-45) to move the drive member causing a varying separation distance. York '814 shows the plurality of guide members and the at least one drive member being distributed around the first and second apertures.

York '814 lacks an apparatus having (1) "a servo motor operatively coupled to the at least one drive member by a feed unit that includes at least one drive belt operatively coupled between an output shaft of the servo motor and the at least one drive member".

Although it is well known to have a belt/pulley drive mechanism coupled to a drive shaft and a driven shaft to impart movement, there is no teaching in the prior art of record that would, reasonably and absent impermissible hindsight, motivate one having ordinary skill in the art to so modify the teachings of York '814, noting that in York '814, the servo motor (36) rotatably drives threaded rod (32) which in turn linearly moves drive platform (24) toward and away from base member (22) without the use of drive belts/pulleys coupled between the servo motor shaft and the at least one drive member (32). Thus, for at least the foregoing reasons, the prior art of record neither anticipates nor rendered obvious the present invention as set forth in independent claims 1 and 23.

4. Regarding claim 13, the prior art of record fails to anticipate or make obvious an apparatus having (1) "track assembly", (2) "a carriage assembly moveably coupled to the track assembly and moveable relative to the work piece", and (3) "a tool feed unit coupled to the carriage assembly and to a tool assembly", solely or in combination, with an apparatus having a

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base member with a first aperture disposed therethrough, a drive platform spaced from the base member and having a second aperture disposed therethrough and in approximate alignment with the first aperture, a plurality of guide members extending between the base and the drive platform, at least one drive member operatively coupled between the drive platform and the base member wherein the plurality of guide members and the at least one drive member are distributed around a perimeter of the first and second apertures, and a servo motor operatively coupled to the at least one drive member for varying a separation distance between the base member and the drive platform.

York '814 is the closest art of record.

York '814 shows in Figure 1 an apparatus (10) comprising a base member (22) having a first aperture/annular portion (at base of 32) disposed there through, a drive platform (24) being spaced apart from the base member by a separation distance and having a second aperture/annular portion (at 32) disposed there through and approximately aligned with the first aperture along an axis, a plurality of guide members (18,20) extending between the drive platform and base member wherein at least one of the drive platform and the base member is moveable along guide members to changed the separation distance (col. 2, lines 26-31), at least one drive member (32) coupled between the drive platform and the base member, and a servo motor (36 and col. 2, lines 43-45) to move the drive member causing a varying separation distance. York '814 shows the plurality of guide members and the at least one drive member being distributed around the first and second apertures.

York '814 lacks an apparatus having (1) "track assembly", (2) "a carriage assembly moveably coupled to the track assembly and moveable relative to the work piece", and (3) "a tool feed unit coupled to the carriage assembly and to a tool assembly".

Although it is well known to have track assembly, carriage and a tool feed unit, there is no teaching in the prior art of record that would, reasonably and absent impermissible hindsight, motivate one having ordinary skill in the art to so modify the teachings of York '814, noting that in York '814, there is no track assembly, carriage assembly coupled to the track, and a tool feed unit coupled to the carriage assembly and to a tool assembly. Thus, for at least the foregoing reasons, the prior art of record neither anticipates nor rendered obvious the present invention as set forth in independent claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mrs. Monica S. Carter, may be reached at 571-272-4475.

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MWT
Examiner
11 April 2007


MONICA CARTER
SUPERVISORY PATENT EXAMINER